

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Kuran, Ayla
Serial No.: 11/540,586
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Art Group: 4132
Examiner: Smith, Natasha N
Atty. Docket No.: PHDL0860-005

For: A Dishwasher and Corresponding ...

Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL RESPONSE TO OFFICE ACTION

Dear Examiner:

Applicant noted typographical errors in the previous submission. Therefore, in response to the Examiner's Office Action, Applicant kindly asks to substitute this supplemental response and to amend the subject application as follows:

AMENDMENTS

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 7 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A dishwasher (1) comprising a washing tub (2) where the appliances are put, a sump (3) under the washing tub (2) where the water in the washing tub (2) is collected during the washing process, a biosensor (7) which detects the microorganisms in the washing water, a memory (10) to which the parameters to be compared are loaded, a microprocessor which detects microorganisms in washing water (9) which compares the signals produced by the biosensor (7) with the parameters loaded to the memory (10) and forwards the result of the comparison and a control unit (11) which arranges the washing program with respect to the data obtained from the microprocessor (9) ~~characterized with a biosensor (7) which detects the microorganisms in the washing water and wherein the memory (10) further comprises acceptable maximum microbiologic pollution rates (MBN0, MBN1, MBN2, MBN3) preloaded by the producer in that the microbiologic pollution rate (MBN) measured by the biosensor (7) in the washing cycles is compared.~~

Claim 2 (currently amended): A dishwasher (1) as in claim 1 ~~characterized in that wherein the biosensor (7) is placed in a measurement chamber (8) which is suitable for taking as much samples as required for measurement from the sump (3) in every cycle of the washing process.~~

Claim 3 (cancelled): ~~A dishwasher (1) as in claim 1 characterized with a memory (10) comprising the acceptable maximum microbiologic pollution rates (MBN0, MBN1, MBN2, MBN3) preloaded by the producer in that the microbiologic pollution rate (MBN) measured by the biosensor (7) in the washing cycles is compared.~~

Claim 4 (currently amended): A dishwasher (1) as in claim 1 ~~and 3~~ characterized with wherein the memory (10) comprising further comprises the temperature values (TP1, TP2, TP3; TP4) which are preloaded by the producer and applied in the washing cycles with respect to the results of the comparison with the limit values of the microbiologic pollution rate (MBN) measured by the biosensor (7) in the washing cycle.

Claim 5 (currently amended): A dishwasher (1) as in claim 1 ~~and 3~~ characterized with wherein the memory (10) comprising further comprises the circulation periods (TS1, TS2, TS3, TS4) which are preloaded by the producer and applied in the washing cycles with respect to the results of the comparison with the limit values of the microbiologic pollution rate (MBN) measured by the biosensor (7) in the washing cycle.

Claim 6 (currently amended): A dishwasher (1) as in claim 1 ~~and 3~~ characterized with wherein the memory (10) comprising further comprises the circulation periods (TS1, TS2, TS3, TS4) which are preloaded by the producer and applied in the washing cycles with respect to the results of the comparison with the limit values of the microbiologic pollution rate (MBN) measured by the biosensor (7) in the washing cycle.

Claim 7 (currently amended): A control method for a dishwasher (1) as in claim 6 characterized in that the washing water is sterilized if the microbiologic pollution rate (MBN) can not be lowered to the required level by the changes in temperature and/or period.

Claim 8 (currently amended): A control method for a dishwasher (1) as in claim 6 ~~or 7~~ characterized in that wherein the washing water is changed and the washing cycle is repeated, if the microbiologic pollution rate (MBN) can not be lowered to the required level by the changes in temperature and/or period.

Claim 9 (currently amended): A control method for a dishwasher (1) ~~as any of the claims above in claim 1~~ comprising the steps below:

The user starts the washing cycle (100),

The user selects either the pre-washing or without pre-washing program (101),

If the without pre-washing program is selected, main washing cycle is started (106),

If the pre-washing program is selected, then the pre-washing program is started (102),

Microbiologic pollution rate (MBN) is measured by the biosensor (7) (103),

MBN is compared with the limit value of the acceptable microbiologic pollution rate (MBN1) for the pre-washing (104),

If $MBN < MBN1$, main washing cycle (106) is started (106),

If $MBN > MBN1$, a second pre-washing cycle is started (105),

Main washing cycle is started (106),

Microbiologic pollution rate (MBN) is measured by the biosensor (7) (107),

MBN is compared with the limit value of the acceptable microbiologic pollution rate (MBN2) for the main washing (108),

If $MBN < MBN2$, main washing cycle is started in TP1 temperature value and TS1 circulation period (109),

If $MBN > MBN2$, main washing cycle is started in TP2 temperature value and TS2 circulation period (110),

Rinsing cycle is started following the main washing (111),

Microbiologic pollution rate (MBN) is measured by the biosensor (7) (112),

It is checked whether the microbiologic pollution has reached the ~~inefficient level~~ accepted microbiologic pollution rate at the negligible level (MBN0) or not (113),

If $MBN = MBN0$, the rinsing water is discharged (200),

If the microbiologic pollution is detected ($MBN > MBN0$), MBN is compared with the limit values (MBN3) of the acceptable microbiologic pollution rate for the rinsing cycle (114),

If $MBN > MBN3$, second rinsing cycle is started (118),

If $MBN < MBN3$, rinsing cycle is started in TP3 temperature value and TS3 circulation period (115),

Microbiologic pollution rate (MBN) is measured by the biosensor (7) (116),

It is checked whether the microbiologic pollution has reached the ~~inefficient level~~ accepted microbiologic pollution rate at the negligible level (MBN0) or not (117),

If $MBN = MBN0$, the rinsing water is started to be discharged (200),

If $MBN > MBN0$, second rinsing cycle is started (118),

Microbiologic pollution rate (MBN) is measured by the biosensor (7) (119),

It is checked whether the microbiologic pollution has reached the ~~inefficient level~~
accepted microbiologic pollution rate at the negligible level (MBN0) or not (120),

If $MBN=MBN0$, the ting water is started to be discharged (200),

If $MBN>MBN0$, second rinsing cycle is started at TP4 temperature value and TS4
circulation period (121),

Microbiologic pollution rate (MBN) is measured by the biosensor (7) (122),

It is checked whether the microbiologic pollution has reached the ~~inefficient level~~
accepted microbiologic pollution rate at the negligible level (MBN0) or not (123), If

$MBN>MBN0$, the rinsing water is started to be discharged (200),

If $MBN>MBN0$, the washing water is sterilized (124),

Sterilized water is used for rinsing during TS5 circulation period (125),

The rinsing water is discharged (200),

The drying cycle is started (201), and

The cycle is ended (202).

Claim 10 (original): A control method for a dishwasher (1) as in claim 9 wherein the
washing water is sterilized by UV (Ultraviolet) technique in the sterilization cycle (124)
of the washing water if $MBN>MBN0$.

REMARKS

Claims 1-10 are pending in the application. The Examiner has rejected claims 1-3 and objected to claims 4-10. The Examiner has objected to claims 4-10 based on informalities. Applicant has amended claims 4-9 to overcome the informality objections. Applicant respectfully request reconsideration of the application. Claim 10 is original.

Claim Amendments

Applicant has amended claims 1-10 to respond to the Examiner's objections. Claim 3 has been cancelled and claim 1 has been amended to include claim 3. Claim 2 and 4-9 to overcome the objections and to correct informalities. Amended matter in claim 9 can be found on page 3, lines 14 and 15 of the description. No new matter has been added and no additional fees are believed to be due.

Claim Rejections – 35 U.S.C. §112

The Examiner has rejected claims 1-3 as being indefinite. Applicant has amended the claims to place them in better condition for examination. Applicant kindly asks that the Examiner reconsider this objection. Applicant kindly points out that the term “microbiological pollution rate” can be found on page 3, lines 4-15.

Claim Rejections – 35 U.S.C. §102(b)

The Examiner rejected Applicants' claims 1-3 under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. No. 5,560,060 issued to *Dausch et al.* (“*Dausch*”). For a claim to be rejected under this statute, it must be anticipated by the prior art. Anticipation occurs when every element of the claimed invention is found in a single prior art reference.¹ In addition to including every element of the claimed invention, the prior art reference must also “be

¹ *Verdegaal Bros., Inc. v. Union Oil Co. of California*, 814 F.2d 628, 632 (Fed. Cir. 1987). *See also, Electro Med. Sys. v. Cooper Life Sciences*, 34 F.3d 1048, 1052 (Fed. Cir. 1994) (stating, “[a]nticipation under 35 U.S.C. §102(b) requires the presence in a single prior art disclosure of each and every element of a claimed invention. . .”); *General Elec.*

enabling and describe the applicant's claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention."² In other words, for the prior art reference to anticipate the claimed invention, all of the elements in the claim must be found in a single piece of prior art "in exactly the same situation and united the same way to perform the identical function. . . ."³

Claims 1 and 3 rejected as being anticipated by *Dausch*

Applicant has amended claim 1 to include the limitations of claim 3, therefore Applicant will respond to the rejection of Claim 3. Claim 3 of Applicants' invention discloses, among other things, "a biosensor (7) which detects the microorganisms in the washing water" and "acceptable maximum microbiologic pollution rates (MBN0, MBN1, MBN2, MBN3) preloaded by the producer in that the microbiologic pollution rate (MBN) measured by the biosensor (7) in the washing cycles is compared".⁴ The Examiner has indicated that *Dausch* discloses the same elements as Applicant's claim 1. Applicants respectfully disagree with the Examiner's position.

Specifically, the Examiner has indicated that *Dausch*

"The sensor used in the dishwasher disclosed in DAUSCH may considered a biosensor in that it detects the present of foreign substances that cause turbidity of the wash water. It would be expected that these substances include microorganisms such as bacteria that result from left over food particles on dishes waiting to be cleaned in the dishwasher, for example".⁵

However, *Dausch* specifically teaches a "turbidity sensor" which sense the amount of soil not microorganisms. See *Dausch*, col. 4, lines 4-8. Likewise, TURBIDITY is defined as "sediment or foreign particles stirred up or suspended, muddy or *turbid water*" in *The*

Co. v. Hoechst Celanese Corp., 740 F.Supp. 305, 313 (Del. 1990) (stating that "[i]n order to anticipate a later claim, a single prior source must contain all of the essential limitations of the claim").

² *In re Paulsen*, 30 F.3d 1475, 1479 (Fed. Cir. 1994).

³ *Sandisk Corp. v. Lexar Media, Inc.*, 91 F.Supp.2d 1327, 1336 (N.D. Cal 2000). See also, *In re Arkley*, 455 F.2d 586, 587 (P.App.Cir. 1972) (stating that "rejections under 35 U.S.C. §102 are proper only when the claimed subject matter is identically disclosed or described in 'the prior art'" (emphasis in original).

⁴ See, Applicants' Claim 1.

American Heritage Dictionary of the English Language, 4th Ed. Further, water containing microorganisms is not necessarily turbid. Therefore, *Dausch* does not teach the detection of wash water that contains microorganisms but turbid water.

Further, the office action states that with regard to claim 3 *Dausch* “discloses a fuzzy logic system which inputs variables from a sensor in a dishwasher (col. 9, lines 1-2) and matches them with rules in a rule base to assign a confidence value.” Examiner’s Office Action p. 5. However, all of these references in *Dausch* again teach a system related to Turbidity and not to microorganism detection as in original claim 3. *Id.* Thus, *Dausch* teaches away from the present invention.

Applicants respectfully assert that *Dausch* does not disclose every limitation of claims 1 or 3, and that the Examiner has not made out a *prima facie* case of anticipation. Specifically, no where does *Dausch* teach a biosensor that detects micororganisms. In fact, as correctly pointed out by the Office Action, *Dausch* teaches a turbidity sensor not a biosensor sensor. Therefore, claims 1 and 3 were and are not anticipated by *Dausch* under 35 U.S.C. §102.

Applicant respectfully request that the Examiner reconsider Applicants’ claims 1 .

Claims 2 rejected as being anticipated by *Dausch*

The Examiner has indicated that *Dausch* anticipates Applicants’ claim 2. Applicants respectfully disagree with the Examiner’s assertion. Specifically, Applicants’ dependent claim 2 disclose the product of claim 1 and add additional limitations.⁶ Applicants respectfully disagree with the Examiner’s rejection.

Because claim 2 is a dependent claims that adds further limitation to independent claim 1, it should be allowed in dependent form because independent claim 1 is not anticipated by *Dausch*⁷. Applicants respectfully request that the Examiner reconsider Applicants’ claim 2.

⁵ Examiner’s Office Action p. 4.

⁶ See, Applicant’s claim 2

Claim Rejections – 35 U.S.C. 103(a)

Applicant's Claims Are Not Rendered Obvious Under 35 U.S.C. §103 Over Any Of The Prior Art Patents

The Examiner has rejected Applicants' claims under 35 U.S.C. §103 based on *Dausch*. Applicants respectfully disagree with the Examiner.

The Examiner has failed to establish a prima facie case of obviousness. When examining a patent application, the Examiner has the initial burden of factually supporting a prima facie conclusion of obviousness.⁸ Additionally, when rejecting claims under 35 U.S.C. §103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness.⁹ In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). Specifically, the Examiner must (1) determine the scope and content of the prior art; (2) determine the differences between the prior art and the claims at issue; and (3) determine the level of ordinary skill in the art.¹⁰ In addition to these factual determinations, the Examiner must also provide "some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."¹¹ Moreover, the analysis supporting obviousness should be made explicit and should "identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements" in the manner claimed.¹²

Only if the Examiner makes a prima facie case of obviousness, does the burden shift to the Applicant for providing evidence of non-obviousness.¹³ Obviousness is then determined based on the evidence as a whole and the persuasiveness of the arguments.¹⁴ Here, the Applicants respectfully assert that the Examiner has failed to meet the evidentiary burden.

⁷ See, *In re Johnson*, 589 F.2d 1070, 1080 (CCPA 1978).

⁸ See, *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

⁹ See, *In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988).

¹⁰ See, *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

¹¹ See, *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

¹² See, *KSR Int'l Co. v. Teleflex*, No. 04-1350, slip op. at 15 (U.S. 4-30-2007).

¹³ See, *In re Oetiker*, 977 F.2d at 1445.

¹⁴ See, *Id.*

Additionally, the cited prior art differs from the Applicants' claims. Therefore, a person of ordinary skill in the art at the time of the invention would not have looked to the prior art cited by the Examiner to create Applicants' claims. As such, the Applicants respectfully request that the Examiner reconsider Applicants' claims.

A. Claims 1 and 2 rejected over *Kobos et al.* (US 6138692) in light of *Kafferlein* (DE 4415823)

With respect to claims 1 and 2, the Examiner has indicated on pages 6 of the Office Action that the rejection did not include claim 3. Applicant has amended claim 1 to include claim 3 and, therefore, kindly asks that the Examiner withdraw this objection.

B. Claims 1 -3 rejected over *Dausch* (US 5560060) in light of *Rothgeb* (US2003/0227394)

With respect to claims 2-4 and 6, the Examiner has indicated on pages 7 of the Office Action that:

Dausch discloses the use of turbidity sensor Nevertheless, this turbidity sensor may not be considered a biosensor as claimed.¹⁵

Further, *Dausch* requires that the "turbidity sensor 26 ... [is] mounted within the recirculation hose...." Col. 3, lines 42-43. However, *Rothgeb* teaches away *Dausch* as it is directed to monitoring invention used for "consumer research with respect to cleaning of laundry and/or dishes." Further, as mentioned above, *Dausch* teaches away from claim 3 of the instant invention.

Here, the Applicants respectfully assert that the Examiner has not made a prima facie case of obviousness because *Dausch* actually teaches away from Applicants' invention and therefore, the person of ordinary skill in the art at the time of the invention would not have looked to *Dausch* to create Applicants' invention.

Further, a person of ordinary skill in the art could not have looked to *Rothgeb* at the time of the invention since Applicant had invented the invention at least as early as Dec. 25,

¹⁵ See, Examiner's Office Action p. 4

2002 almost one year before the publication of *Rothgeb*. As such, a person of ordinary skill in the art could not have combined *Dausch with Rothgeb* at the time Applicant's invention.

Therefore, *Dausch with Rothgeb* cannot render Applicants' invention obvious under 35 U.S.C. §103 because a person of ordinary skill in the art would not look to this piece of prior art to create Applicants' inventio

Conclusion

Applicants believe they have addressed and responded to every point raised in the Examiner's present action. For the reasons stated above, Applicants respectfully request reconsideration of their application.

Respectfully submitted,

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